What is claimed is:

1. An electrophotographic photoreceptor having an interlayer and a photosensitive layer on an electroconductive substrate, wherein the interlayer comprises any one of 1) an N-type semiconductive particle comprising at least one of transition metals having an atomic number of 21 to 30, 39, 41 to 48 and 57 to 80, a total amount of the transition metals having an atomic number of 21 to 30, 39, 41 to 48 and 57 to 80 being from 100 ppm to 2.0% by mass, or 2) a metal oxide particle comprising a silicon atom in a bond energy spectrum by an X-ray photoelectron spectroscopy at a ratio represented by the following Formula (1):

Formula (1)

$0.02 \leq Si/M \leq 0.55$

Si: a peak intensity of a silicon atom among the bond energy spectrum, and

M: a peak intensity of a metal atom among the bond energy spectrum.

2. The electrophotographic photoreceptor of claim 1, wherein the particle has the N-type semiconductive particle.

3. The electrophotographic photoreceptor of claim 2, wherein the N-type semiconductive particle is an

anatase-type titanium oxide pigment.

4. The electrophotographic photoreceptor of claim 2, wherein the N-type semiconductive particle contains a metal oxide selected from titanium oxide, lead oxide and tin oxide.

5. The electrophotographic photoreceptor of claim 2, wherein the transition metal is a transition metal having an atomic number of 21 to 30, 39 and 41 to 48.

6. The electrophotographic photoreceptor of claim 2, wherein the transition metal is a niobium element having an atomic number of 41.

7. The electrophotographic photoreceptor of claim 2, wherein a surface roughness Rz of the electroconductive substrate is from 0.5 to 2.5 μm.

8. The electrophotographic photoreceptor of claim 3, wherein an anatase degree of the anatase-type titanium oxide pigment is from 90 to 100%.

9. The electrophotographic photoreceptor of claim 1, wherein the N-type semiconductive particle is surface-treated by a reactive organic silicon compound.

10. The electrophotographic photoreceptor of claim 2, wherein the N-type semiconductive particle has a number average primary particle diameter of from 10 nm to 200 nm.

11. The electrophotographic photoreceptor of claim 1, wherein a film thickness T of the interlayer has a relation represented by the following Formula (1) with the surface roughness Rz:

Formula (1)

$0.7Rz \leq T \leq 20 \quad (\mu m)$

12. The electrophotographic photoreceptor of claim 1, wherein the photosensitive layer has a layer structure comprising a charge generation layer and a charge transportation layer.

13. The electrophotographic photoreceptor of claim 2, wherein the interlayer contains a resin having fusion heat of from 0 to 40 J/g.

14. The electrophotographic photoreceptor of claim 1, wherein the interlayer contains a rein having a water absorption coefficient of 5% by mass or less.

15. The electrophotographic photoreceptor of claim

13, wherein the interlayer contains a rein having a water absorption coefficient of 5% by mass or less.

16. The electrophotographic photoreceptor of claim 15, wherein a surface roughness Rz of the electroconductive substrate is from 0.5 to 2.5 μm.

17. The electrophotographic photoreceptor of claim 15, wherein a film thickness T of the interlayer has a relation represented by the following Formula (1) with the surface roughness Rz:

Formula (1)

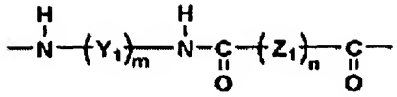
$0.7Rz \leq T \leq 20 \quad (\mu m)$.

18. The electrophotographic photoreceptor of claim 14, wherein the resin is an alcohol-soluble polyamide.

19. The electrophotographic photoreceptor of claim 8, wherein the transition metal is a niobium element having an atomic number of 41.

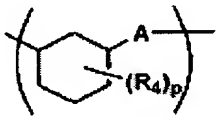
20. The electrophotographic photoreceptor of claim 18, wherein the resin is a polyamide having a repeating unit structure represented by the following Formula (3):

Formula (3)



(wherein Y_1 represents a group containing a divalent alkyl-substituted cycloalkane, Z_1 represents a methylene group, m represents a natural number of 1 to 3 and n represents a natural number of 3 to 20).

21. The electrophotographic photoreceptor of claim 20, wherein the Y_1 has the following chemical structure:



(wherein A represents a single bond or a 1-4C alkylene group, R_4 represents an alkyl group and p represents a natural number of 1 to 5).

22. The electrophotographic photoreceptor of claim 1, wherein the particle contains the metal oxide particle.

23. An apparatus comprising the electrophotographic photoreceptor of claim 1, and at least one of a charging unit for uniformly charging the electrophotographic photoreceptor, a latent image forming unit for forming an electrostatic latent image on the charged electrophotographic photoreceptor, a developing unit for

visualizing the electrostatic latent image formed on the electrophotographic photoreceptor, a transferring unit for transferring to a transfer material the toner image visualized on the electrophotographic photoreceptor, a charge removing unit for removing a charge on the electrophotographic photoreceptor after the transfer, and a cleaning unit for removing the residual toner on the electrophotographic photoreceptor after the transfer.

24. The apparatus of claim 23, which comprises an electrophotographic photoreceptor integrally supported with at least one of a charging unit for uniformly charging said electrophotographic photoreceptor, a latent image forming unit for forming an electrostatic latent image on the charged electrophotographic photoreceptor, a developing unit for visualizing the electrostatic latent image on said electrophotographic photoreceptor, a transferring unit for transferring to a transfer material the toner image visualized on said electrophotographic photoreceptor, a charge removing unit for removing a charge on said electrophotographic photoreceptor after the transfer, and a cleaning unit for removing the residual toner on said electrophotographic photoreceptor after the transfer.

25. The apparatus of claim 23, which comprises an electrophotographic photoreceptor, with a charging unit for

uniformly charging the electrophotographic photoreceptor, a latent image forming unit for forming an electrostatic latent image on the charged electrophotographic photoreceptor, a developing unit for visualizing the electrostatic latent image formed on the electrophotographic photoreceptor to form a toner image, and a transferring unit for transferring to a transfer material the visualized toner image on said electrophotographic photoreceptor.

[Claim 26] The apparatus of claim 23, wherein the charging unit is a contact charging system.

26. The apparatus of claim 23, wherein the charging unit is a contact charging system.